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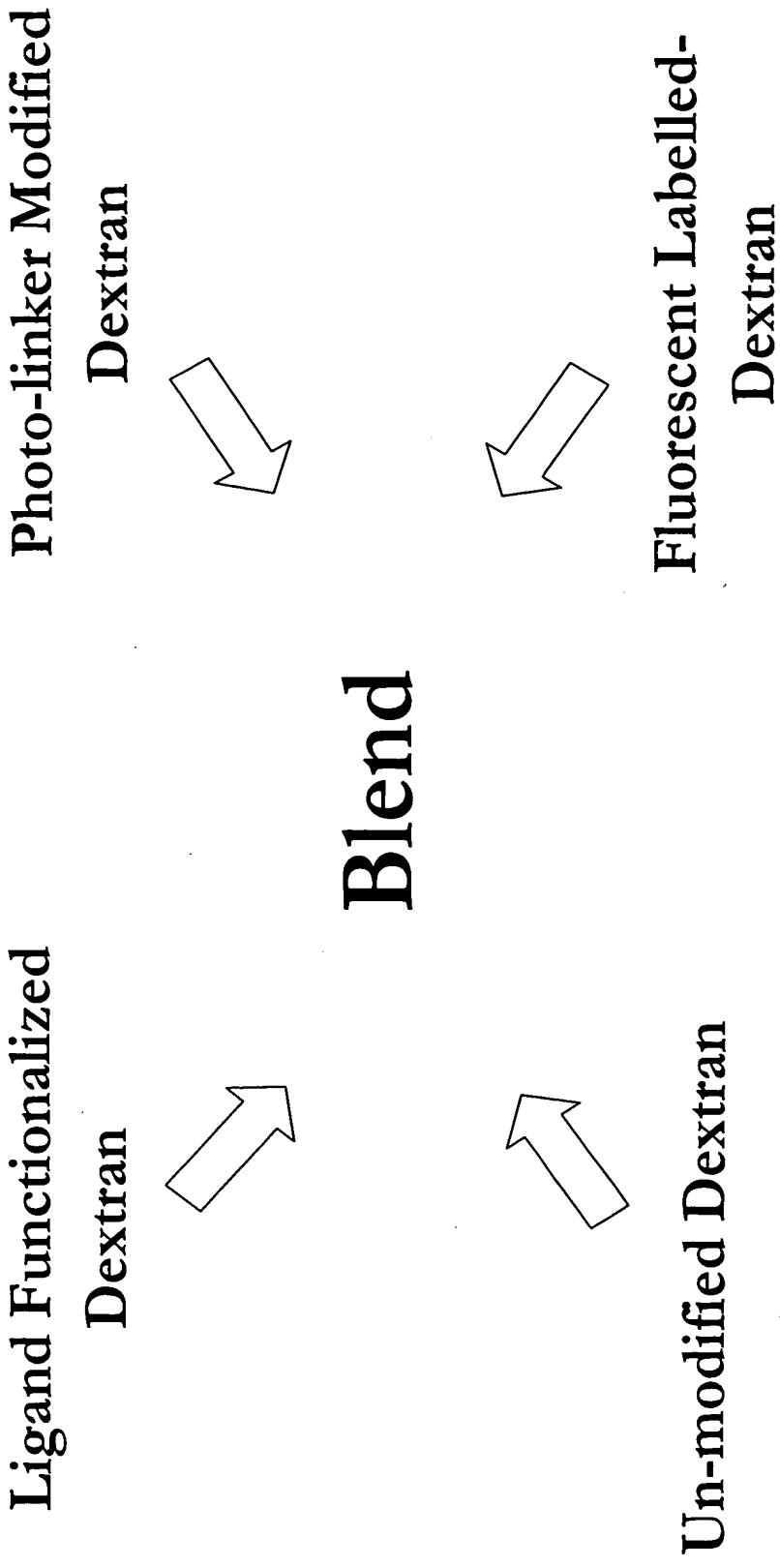
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# Chemistry Platform of Polymer Blend



- ❖ Un-modified dextran (as a diluent of ligand functionalized dextran and/or photo-linker modified dextran to adjust ligand and cross-linker density)
- ❖ Fluorescence labeled-dextran

**Figure 1**

# Synthesis of Photocross-linkable Monomer

Title: PHOTOCROSSLINKED  
HYDROGEL BLEND SURFACE  
COATINGS

Inventor(s): Pil-je Um et al.  
DOCKET NO.: 035394-0256

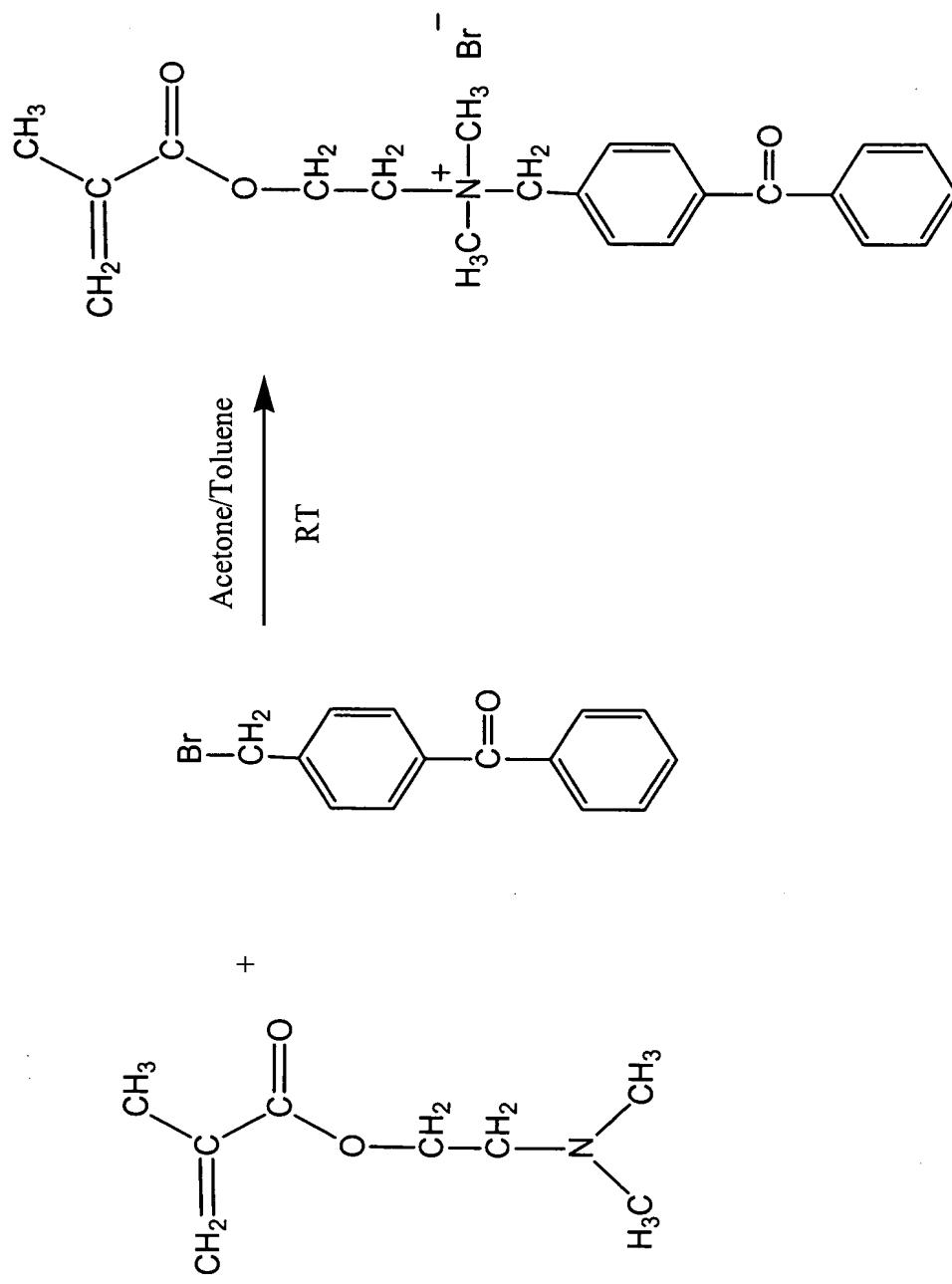


Figure 2

# SAX-Copolymer Synthesis

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HYDROGEL BLEND SURFACE  
COATINGS  
Inventor(s): Pil-je Um et al.  
DOCKET NO.: 035394-0256

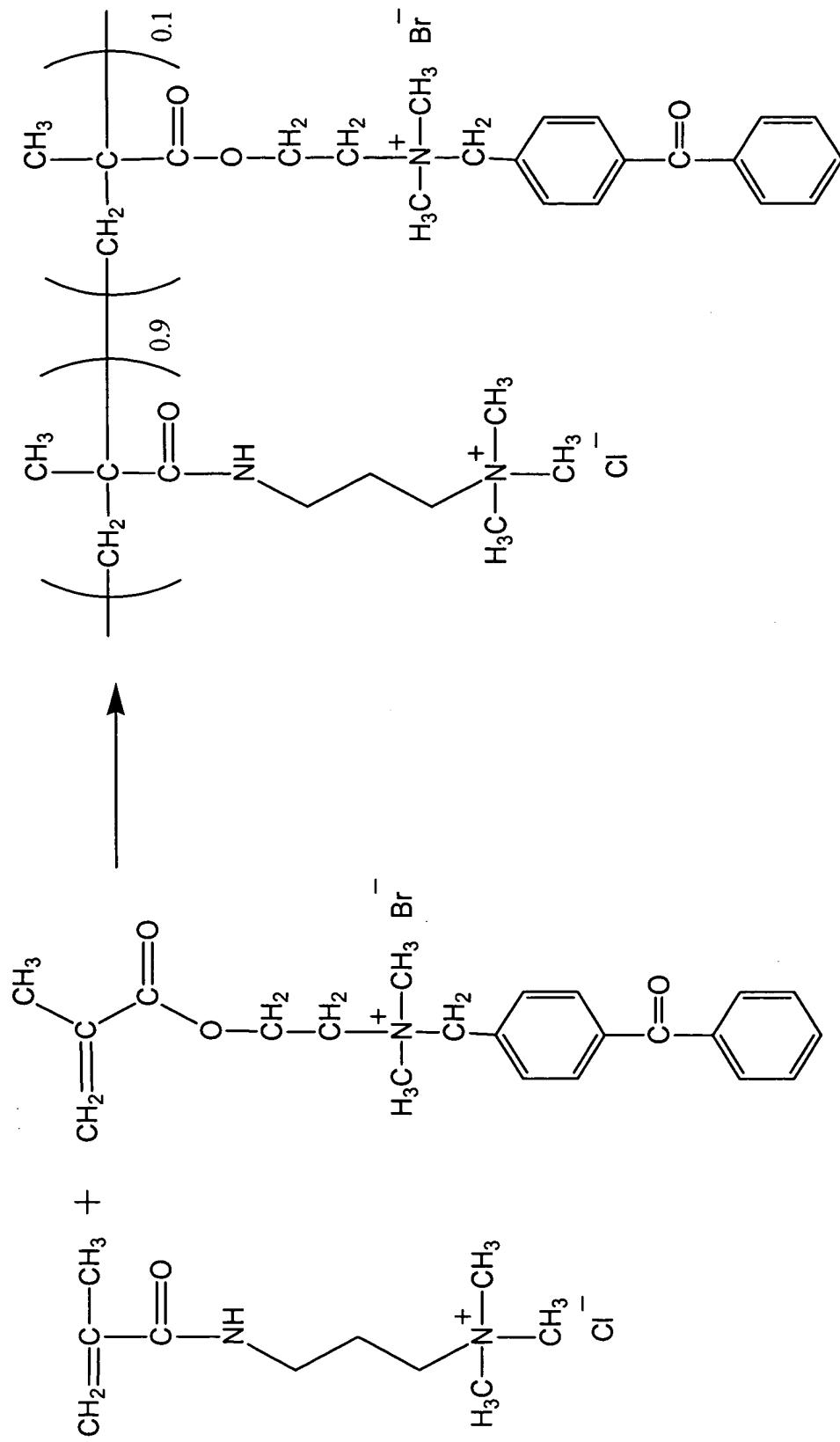


Figure 3

# SELDI Spectra of 3 mol.% BP SAX Chip Prepared by Blending (a) Low Mass Range (2-30 kDa), (b) High Mass Range (30 -160 kDa)

Title: PHOTOCROSSLINKED HYDROGEL BLEND SURFACE COATINGS  
Inventor(s): Pil-je Um et al.  
DOCKET NO.: 035394-0256

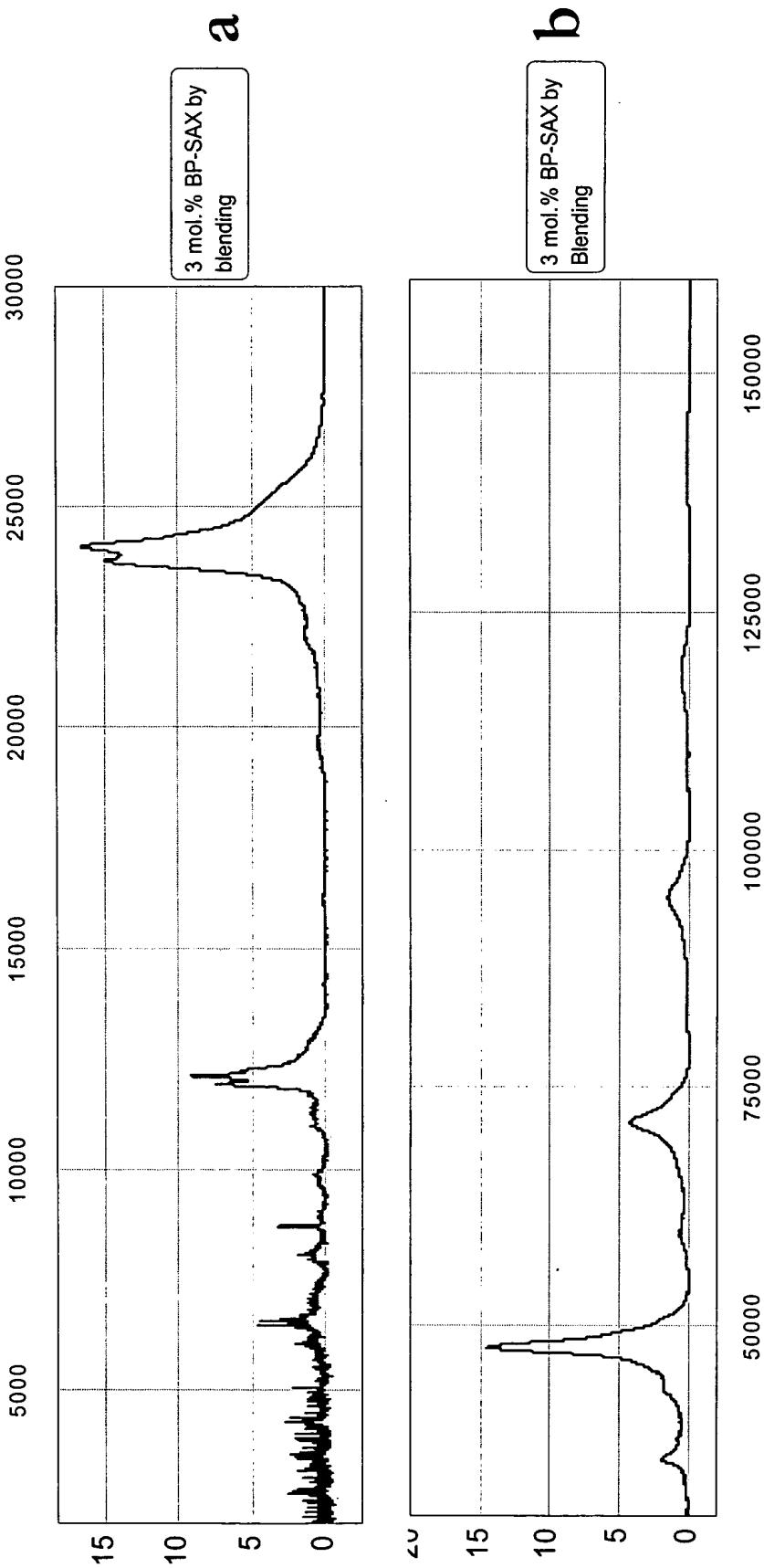


Figure 4

# Derivatization of Dextran with Benzophenone

Title: PHOTOCROSSLINKED  
HYDROGEL BLEND SURFACE  
COATINGS  
Inventor(s): Pil-je Um et al.  
DOCKET NO.: 035394-0256

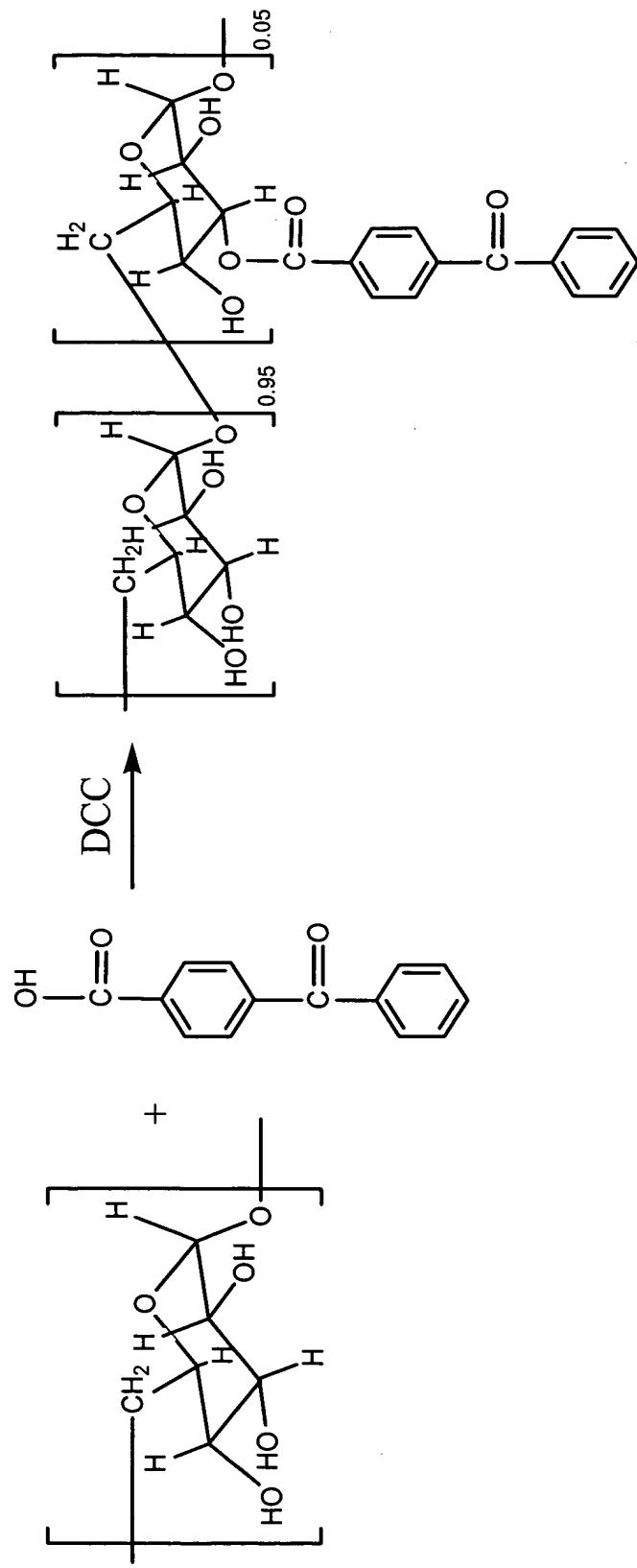


Figure 5

# Synthesis of 4-(Glycidyloxy)benzophenone

Title: PHOTOCROSSLINKED  
HYDROGEL BLEND SURFACE  
COATINGS  
Inventor(s): Pil-je Um et al.  
DOCKET NO.: 035394-0256

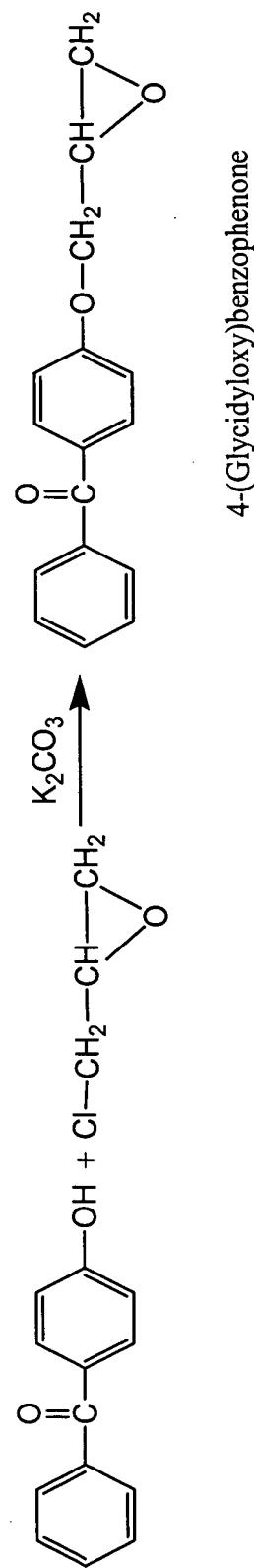


Figure 6

# Derivatization of Dextran with Benzophenone

Title: PHOTOCROSSLINKED  
HYDROGEL BLEND SURFACE  
COATINGS  
Inventor(s): Pil-je Um et al.  
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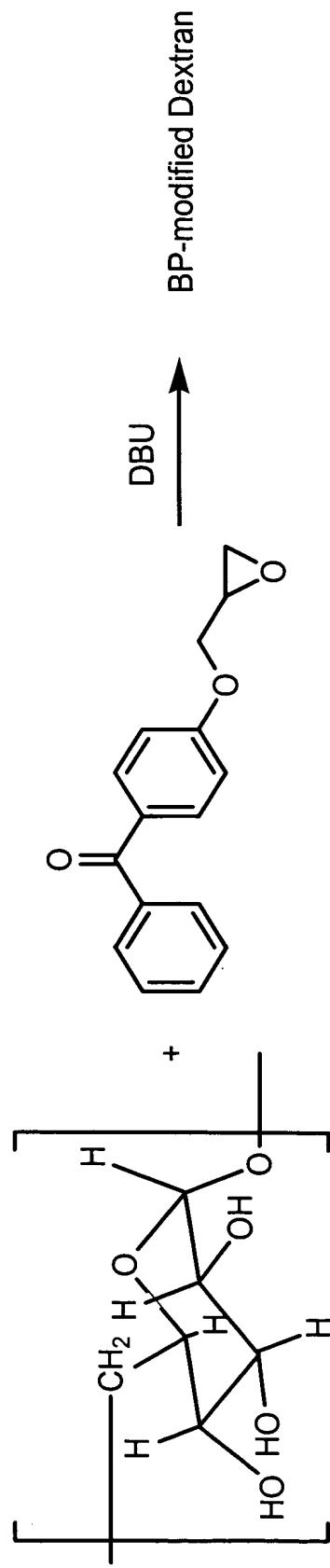


Figure 7

FTIR Spectra of (a) Dextran Hydrogel ; (b)  
CDI-activated Dextran Hydrogel on Al chip

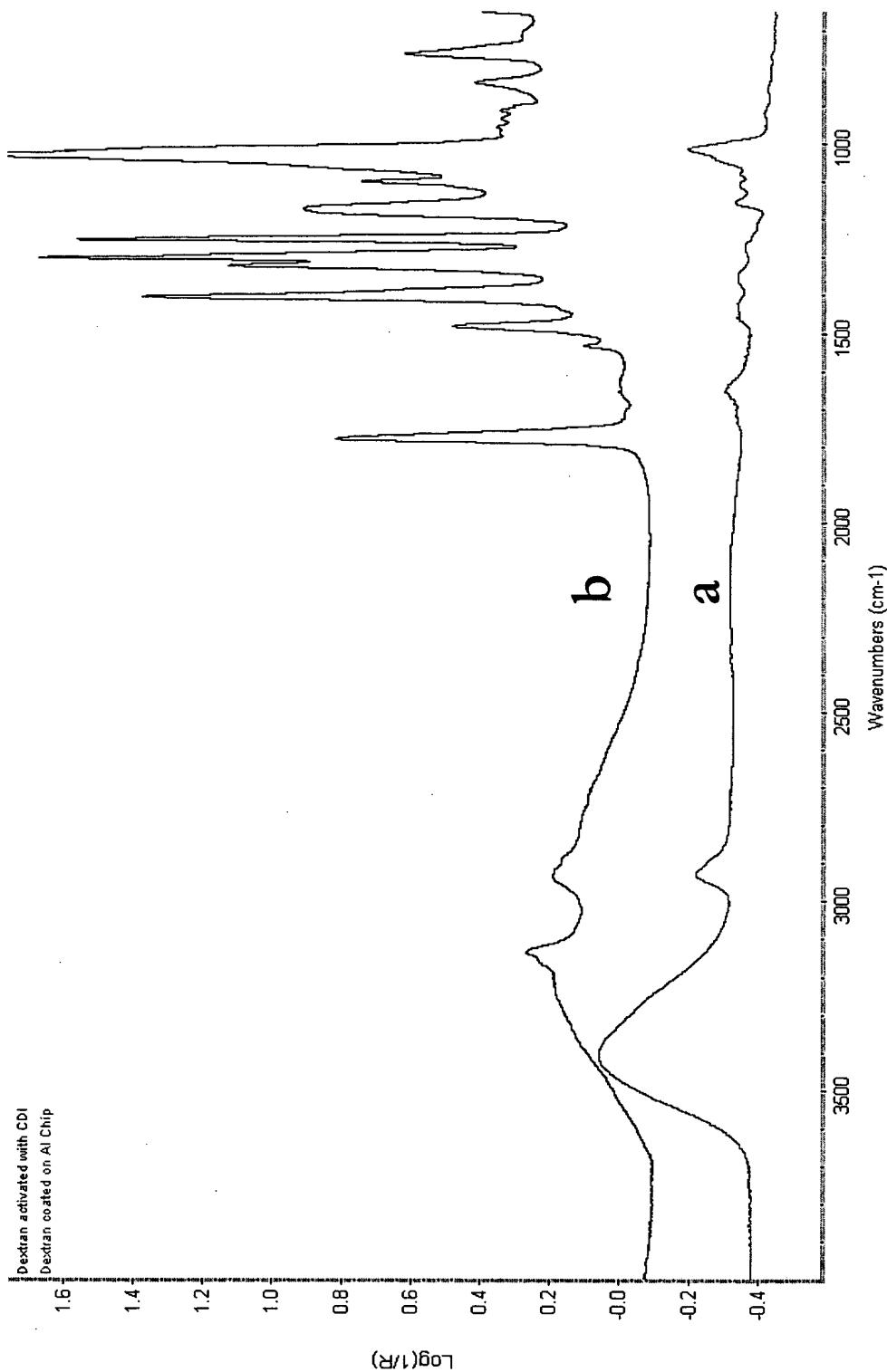


Figure 8

# SELDI Spectrum of CDI-Dextran Chip Used for an Antibody-Antigen Recognition Study

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HYDROGEL BLEND SURFACE  
COATINGS  
Inventor(s): Pil-je Um et al.  
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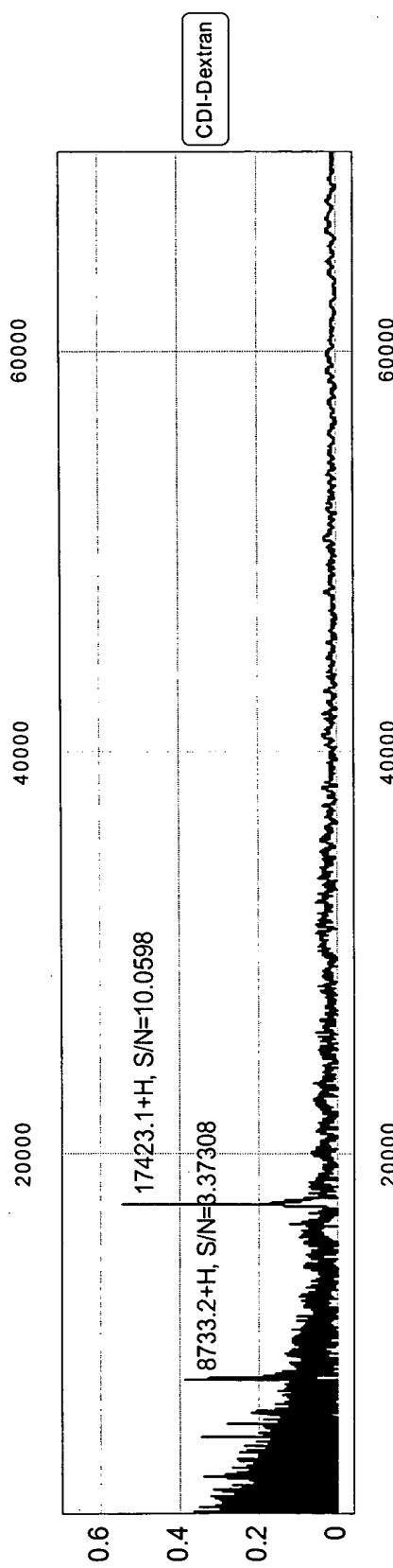


Figure 9

SELDI Spectra of DEAE Chip in the (a) Low Mass (2-20kDa), and (b) High Mass (20-160 kDa)

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Inventor(s): Pil-je Um et al.  
DOCKET NO.: 035394-0256

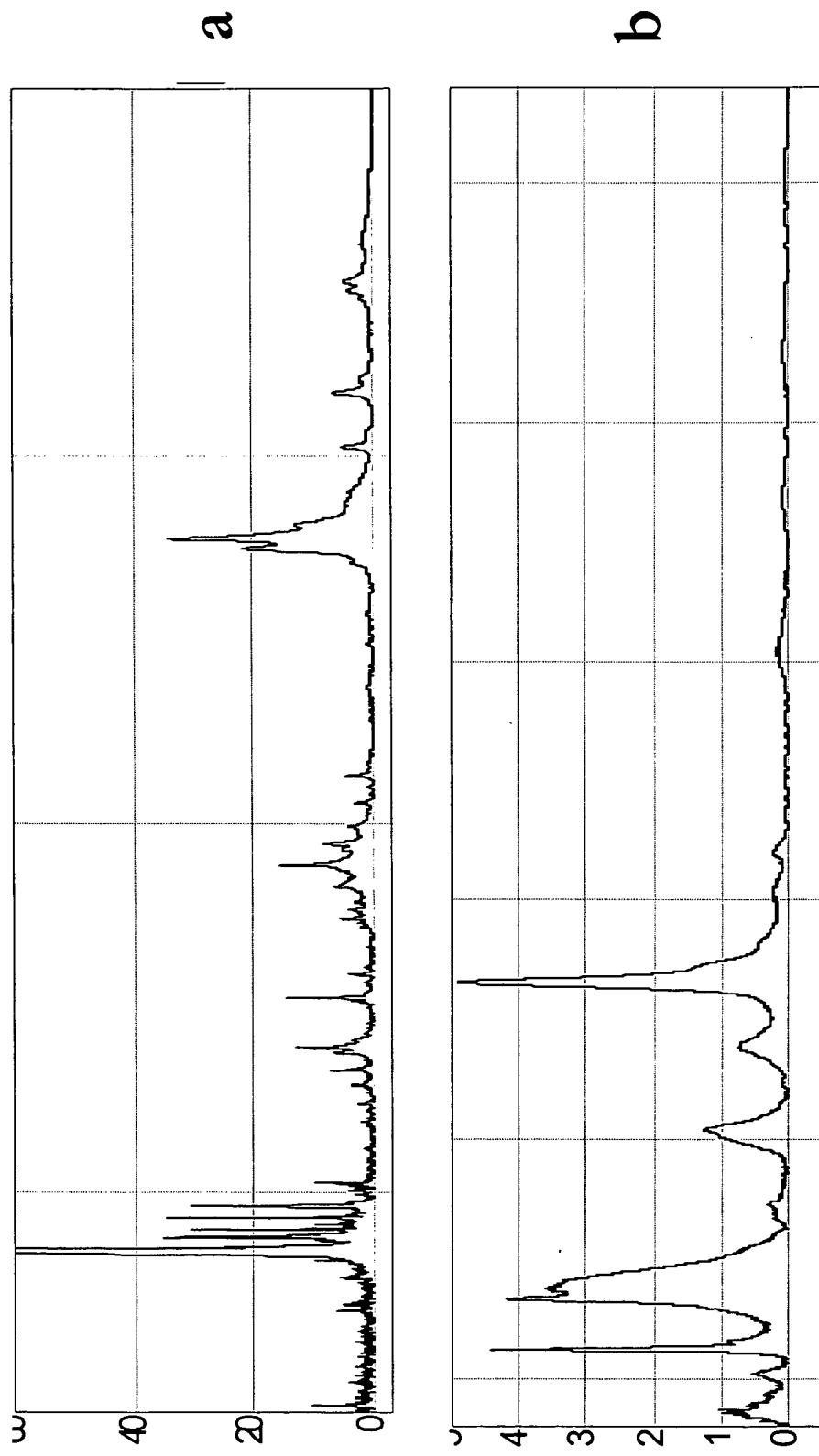


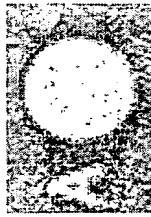
Figure 10

# MEP Dyed with Ponceau S

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HYDROGEL BLEND SURFACE  
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Inventor(s): Pil-je Um et al.  
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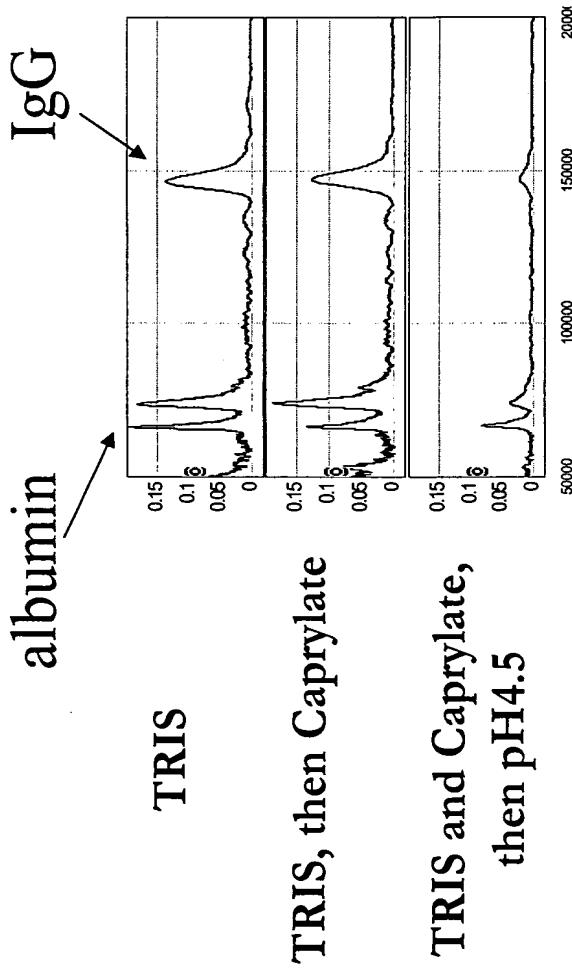
Bare Substrate



MEP Gel Coated

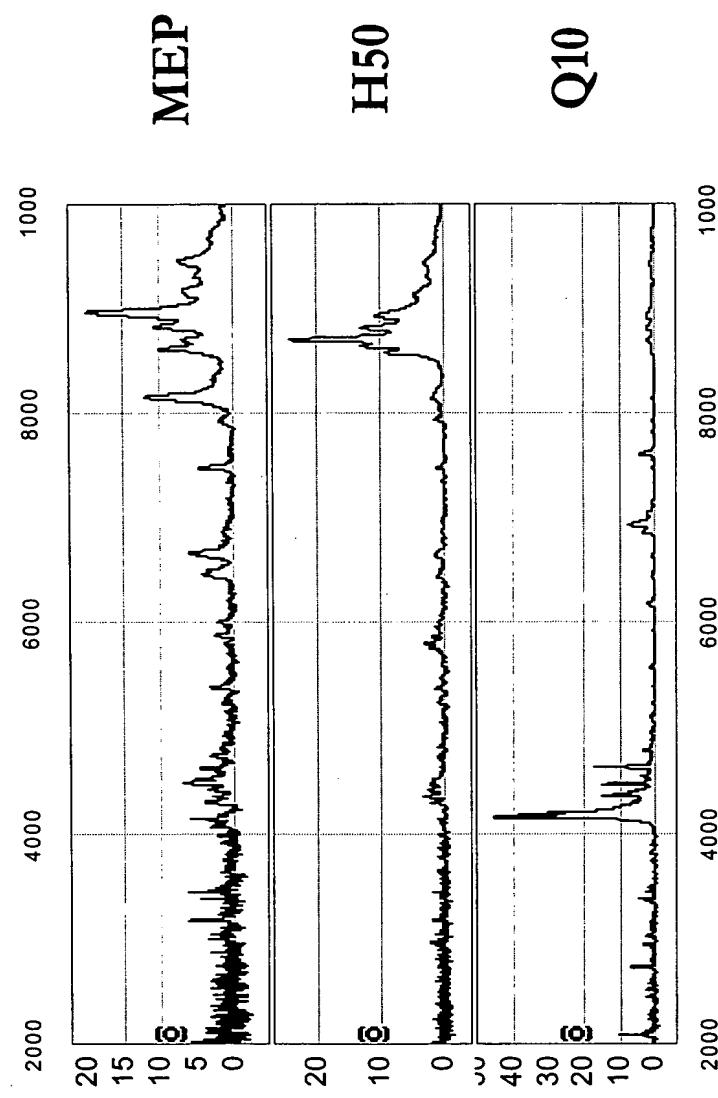
# Selective Binding/Washing of IgG on MEP

- IgG is strongly bind to MEP Array at physiological condition, such as PBS (or TRIS) 7.2.
- Albumin is washed off little more with hydrophobic detergent like Caprylate.
- Then by lowering pH to 4.5 where MEP becomes charged, IgG is washed off.



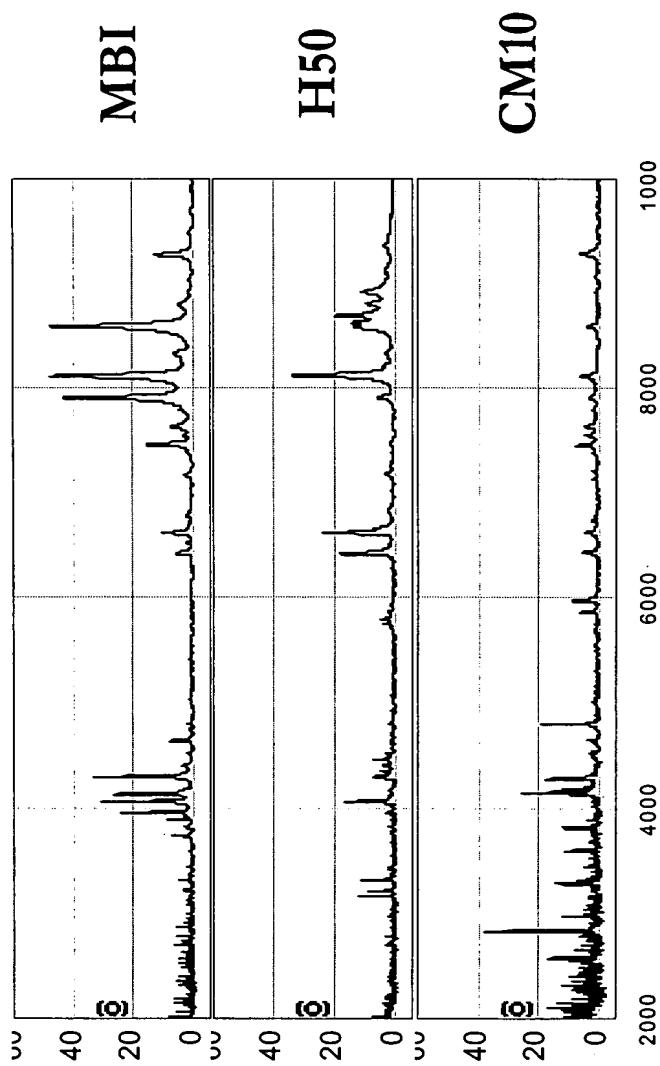
# Profiling of Albumin Depleted Serum

Title: PHOTOCROSSLINKED  
HYDROGEL BLEND SURFACE  
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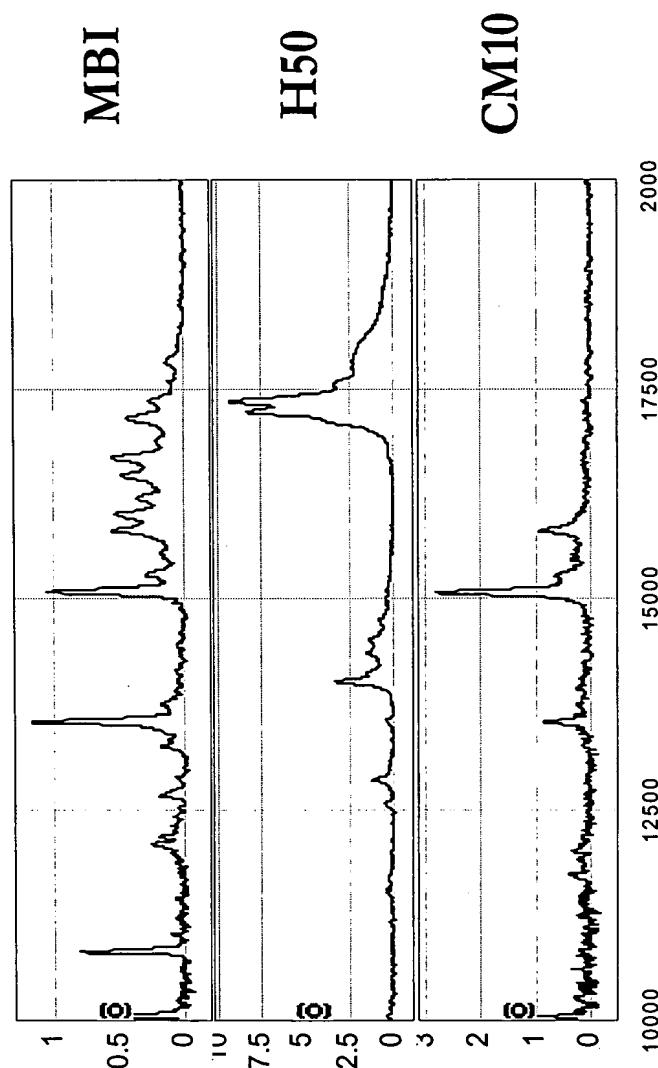


FIG. 15